WHAT IS CLAIMED IS:

1. A sprocket comprising:

a base steel member comprising an outer toothed profile surface, at least a portion of the outer toothed profile surface having a wear and corrosion resistant coating disposed thereon;

the coating comprising an alloy, the alloy comprising at least 60 weight % iron, cobalt, nickel, or alloys thereof.

2. The sprocket of claim 1, wherein the base steel member comprises a medium carbon content steel.

3. The sprocket of claim 1, wherein the base steel member comprises a surface hardened zone extending inwardly from the outer toothed profile surface.

4. The sprocket of claim 3, wherein the surface hardened zone is induction hardened.

5. The sprocket of claim 1, wherein the coating has a thickness of 1-2mm.

6. The sprocket of claim 1, wherein the coating is metallurgically bonded to the base steel member.

7. The sprocket of claim 1, wherein the base metal member comprises a one-piece ring.

8. The sprocket of claim 1, wherein the base metal member comprises an arcuate segment.

9. The sprocket of claim 1, wherein the base metal member comprises a plurality of arcuate segements.

10. An undercarriage assembly of a crawler-type tractor, the assembly comprising the sprocket of claim 1.

11. A method of producing a wear and corrosion resistant sprocket, the comprising:

(i) machining a base steel member to form an outer toothed profile surface thereon;

(ii) applying a coating to at least a portion of the surface; and

(iii) fusing the coating to the base steel member.

12. The method of claim 11, wherein step (i) comprises at least one of milling, grinding and polishing.

13. The method of claim 11, wherein step (i) comprises machining the base steel member such that the outer surface is provided with a dimension which is less than a desired final outer dimension of the finished coated sprocket by an amount corresponding to the desired thickness of the fused coating.

14. The method of claim 11, wherein the base steel member comprises a one-piece ring.

15. The method of claim 11, wherein the base steel member comprises an arcuate segment.

16. The method of claim 11, wherein the coating is applied in the form of a slurry, the slurry comprises the alloy, the alloy comprising at least 60% by weight of iron, cobalt, nickel or alloys thereof.

17. The method of claim 16, wherein step (ii) comprises spraying the slurry onto at least a portion of the surface.

18. The method of claim 16, wherein step (ii) comprises dipping the base metal member into the slurry.

19. The method of claim 11, further comprising the step of heating the base metal member prior to step (ii).

20. The method of claim 19, wherein based metal member is heated to approximately 300° F.

21. The method of claim 16, wherein step (ii) comprises multiple applications of the slurry coating.

22. The method of claim 21, wherein the sprocket is heated between applications of the slurry coating.

23. The method of claim 11, wherein the method further comprises machining the coating to remove excess material prior to step (iii).

24. The method of claim 11, wherein step (iii) comprises heating the base metal member in a belt-type furnace.

25. The method of claim 24, wherein step (iii) further comprises heating the base metal member in a hydrogen-containing atmosphere.

26. The method of claim 11, wherein step (iii) comprises heating the base metal member in a vacuum-type furnace.

27. The method of claim 26, wherein step (iii) further comprises heating the base metal member in an argon-containing environment.

28. The method of claim 11, wherein no further machining of the coating is performed prior to placing the sprocket into service.

29. The method of claim 11, further comprising heat treating the sprocket subsequent to step (iii).

30. The method of claim 29, wherein the subsequent heat treatment comprises induction hardening.

31. The method of claim 30, wherein the subsequent heat treatment further comprises quenching and tempering.